

What is claimed is:

1. An apparatus for attaching a door to a passenger vehicle body, comprising:

5 a lift arm rotatably connecting the door to the vehicle body, such that said lift arm imparts upward rotational movement to the door relative to the vehicle body as upward pressure is applied to said lift arm.

2. The apparatus of claim 1, further comprising a hinge assembly connecting the door to said arm, such that the door pivots horizontally about said hinge assembly as outward pressure
10 is applied to a trailing edge of the door.

3. The apparatus of claim 2, wherein said hinge assembly comprises:

15 a pair of hinge stabilizer bars, wherein each of said pair of hinge stabilizer bars is spaced apart from the other hinge stabilizer bar by a gap extending longitudinally between said pair of hinge stabilizer bars; and

at least one hinge connected to said hinge stabilizer bars.

4. The apparatus of claim 2, further comprising a means for selecting whether the door opens horizontally by pivoting about said hinge assembly or opens vertically as a result of said arm
20 imparting upward rotational movement to the door relative to the vehicle body.

5. The apparatus of claim 4, wherein said selecting means is a stop pin assembly.

6. The apparatus of claim 5, wherein said stop pin assembly is rotatably connected to said hinge assembly.
7. The apparatus of claim 6, wherein said stop pin assembly is rotatably connected to at least one of said hinge stabilizer bars.
8. The apparatus of claim 1, further comprising a lift plate connecting said arm to the vehicle body.
9. The apparatus of claim 2, further comprising a door plate connecting said hinge assembly to the door.
10. The apparatus of claim 8, further comprising a means for applying upward force to the lift arm connected to and extending between said lift plate and said arm.
11. The method of claim 10, wherein said means for applying upward force is selected from the group consisting of a shock, pneumatics, a spring, hydraulics, a magnet, and an electric actuator.
12. The apparatus of claim 1, further comprising a second lift arm rotatably connecting the door to the vehicle body.

13. The apparatus of claim 2, wherein the door pivots horizontally about said hinge assembly to a fully-opened position as outward pressure is applied to a trailing edge of the door.

14. An apparatus for attaching a door to a passenger vehicle body, comprising:

5 a lift plate;

a door plate; and

a lift arm rotatably connected to said lift plate and extending between said lift plate and said door plate, wherein said lift arm imparts upward rotational movement to the door relative to the vehicle body as upward pressure is applied to said lift arm.

10 15. The apparatus of claim 14, further comprising a hinge assembly connecting the door to said lift arm, such that the door pivots horizontally about said hinge assembly as outward pressure is applied to a trailing edge of the door.

15 16. The apparatus of claim 15, wherein said hinge assembly comprises:

a pair of hinge stabilizer bars, wherein each of said pair of hinge stabilizer bars is spaced apart from the other hinge stabilizer bar by a gap extending longitudinally between said pair of hinge stabilizer bars; and

at least one hinge connected to said hinge stabilizer bars.

20 17. The apparatus of claim 15, further comprising a means for selecting whether the door opens horizontally by pivoting about said hinge assembly or opens vertically as a result of said arm

imparting upward rotational movement to the door relative to the vehicle body.

18. The apparatus of claim 17, wherein said selecting means is a stop pin assembly.

5 19. The apparatus of claim 18, wherein said stop pin assembly is rotatably connected to said hinge assembly.

20. The apparatus of claim 19, wherein said stop pin assembly is rotatably connected to at least one of said hinge stabilizer bars.

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21. The apparatus of claim 14, further comprising a means for applying upward force to the lift arm connected to and extending between said lift plate and said arm.

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22. The method of claim 21, wherein said means for applying upward force is selected from the group consisting of a shock, pneumatics, a spring, hydraulics, a magnet, and an electric actuator.

23. The apparatus of claim 14, further comprising a second lift arm rotatably connecting the door to the vehicle body.

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24. The apparatus of claim 15, wherein the door pivots horizontally about said hinge assembly to a fully-opened position as outward pressure is applied to a trailing edge of the door.

25. An apparatus for connecting a door to a passenger vehicle having a body, comprising:

an assembly that selectively opens the side door during normal operation either horizontally or vertically.

5 26. A method of opening a door connected to a passenger vehicle body, comprising the steps of:

(a) rotating a stop pin assembly to a predetermined position depending upon whether the door is to be opened horizontally or vertically;

(b) opening the door slightly horizontally; and

10 (c) depending upon the positioning of the stop pin assembly in said step (a), either applying outwards pressure to a trailing edge of the door such that the door continues to open horizontally, or applying upwards pressure to the door such that the door opens vertically.

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